

**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
NEW MEXICO STATE OFFICE**

**Project: Cave and Abandoned Mine Closures Due to White Nose Syndrome  
EA Log Number: DOI-BLM- NM- P010- 2011- 16 - EA  
Location: Various abandoned mine and designated cave sites in New Mexico.**

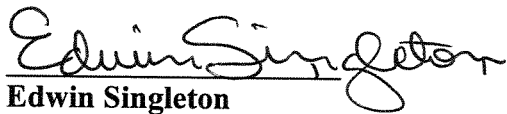
**Finding of No Significant Impact**

After studying the potential impacts of the proposed action as described in this Environmental Assessment, I do not anticipate any significant impacts on the quality of the human environment. I base my finding of no significant impacts on the factors related to context and intensity of impacts as defined by the Council on Environmental Quality (CEQ) at 40 CFR, parts 1500-1508. I conclude that the implementation of the proposed action would not result in any undue or unnecessary environmental degradation and an Environmental Impact Statement is not required.



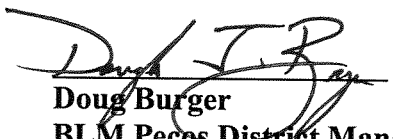
**Dave Evans  
BLM Farmington District Manager**

11-4-10  
**Date**



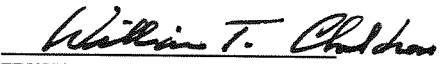
**Edwin Singleton  
BLM Albuquerque District Manager**

11-4-10  
**Date**



**Doug Burger  
BLM Pecos District Manager**

11/4/10  
**Date**



**William Childress  
BLM Las Cruces District Manager**

11/4/10  
**Date**

## **DECISION RECORD**

### **DOI-BLM- NM- P010- 2011- 16 – EA**

#### **Decision:**

It is my decision to implement an indefinite closure of sites listed in this EA in addition to those that meet the criteria identified in Appendix A to reduce the opportunity for the spread of White-Nose Syndrome (WNS) and related bat mortality; and to enable BLM to respond in a timely and effective manner to new information regarding the threat of WNS. This EA analyzes the impacts of cave closure and does not directly close the listed caves; a Federal Register Notice will be prepared in accordance with Code of Federal Regulations (CFR), Section 8364.1, as follows to enact the closures.

#### **Authorities:**

FLPMA, The Federal Cave Resources Protection Act of 1988 (FCRPA), as amended, PL 100-691(16 .S.C. 4301 et seq),-BLM Manual 8380, Cave and Karst Resources Management, Title 43 Code of Federal Regulations (CFR), Part 37 – Cave Management, 43 CFR § 2392.26 (all), Permits for Recreation on Public Lands, Visitor Services, Closure and Restriction Orders - 43 Code of Federal Regulations (CFR), Section 8364.1, as follows, and BLM Washington Office (WO) Instruction Memorandum (IM) No. 2010-181, “White-nose Syndrome” 8/20/2010.

#### **Alternatives Considered:**

The EA considered two alternatives: the No Action Alternative and the Proposed Action. The No Action Alternative was not selected because it would not be effective in reducing the opportunity for the spread of WNS and related bat mortality; and would not enable BLM to respond in a timely and effective manner to new information regarding the threat of WNS.

#### **Alternatives considered but eliminated from detailed study:**

A proposed alternative for a blanket closure of all sites was considered but eliminated from further analysis due to: 1) the lack of conclusive scientific data regarding the source of conditions under which WNS is spread<sup>1</sup>, and 2) the unrealistic challenge of closing over 1,000 caves and thousands of additional abandoned mines spread out over millions of acres of public lands in New Mexico.

#### **Rationale for Decision:**

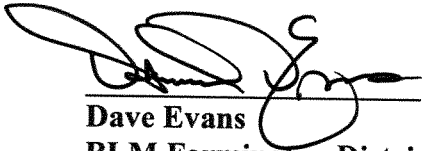
The proposed action was developed in accordance with the National Environmental Policy Act (NEPA), articulated in Section 101 of NEPA and implemented through regulations, policies and guidelines issued by the Council on Environmental Quality at 40 CFR 1500. The proposed action alternative would help to reduce the opportunity for the spread of WNS and related bat mortality, and to enable BLM to respond in a timely and effective manner to new information regarding the threat of WNS. Additionally, the proposed action is consistent with the Draft *National Plan for Assisting States, Federal Agencies, and Tribes in Managing White-Nose Syndrome in Bats*.

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<sup>1</sup> U.S. Fish and Wildlife Service “White-Nose Syndrome” webpage - [http://www.fws.gov/White Nose Syndrome](http://www.fws.gov/White%20Nose%20Syndrome).

Protest/Appeal Language:

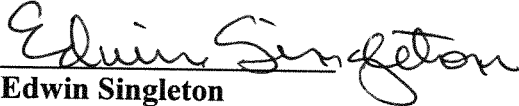
This decision shall take effect immediately upon the date it is signed by the Authorized Officer and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2801.10(b)). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a notice of appeal must be filed in the office of the Authorized Officer at the New Mexico State Office.



Dave Evans  
BLM Farmington District Manager

11-4-2010

Date



Edwin Singleton  
BLM Albuquerque District Manager

11-4-10


Date



Doug Burger  
BLM Pecos District Manager

11/4/10

Date



William Childress  
BLM Las Cruces District Manager

11/4/10

Date

**White-Nose Syndrome**  
**Cave and Abandoned Mine Site Closure Strategy**  
ENVIRONMENTAL ASSESSMENT  
DOI-BLM- NM- P010- 2011- 16 – EA

**1.0 Introduction:**

White-nose syndrome (WNS) was first observed in February 2006 in a cave roughly 40 miles west of Albany, New York, when a cave visitor photographed hibernating bats with an unusual white substance on their muzzles and reported the presence of several dead bats. The following winter, New York Department of Environmental Conservation biologists documented hundreds of cases of bats exhibiting signs of the syndrome in several more caves. The fungus associated with the disease has now been reported as far west as Missouri and Oklahoma. Mortalities at affected sites in the Northeast have ranged from 80-100 percent of hibernating bats and have affected six species of bats, including one endangered species. The fungus has also been observed on live bats in three other species. More than a million hibernating bats have died since the disease first appeared.

Scientific data collected to date indicates that transmission of WNS is occurring bat-to-bat and cave-to-bat. Scientists also suspect transmission of WNS may be facilitated by human activity in caves where bats hibernate, because of the geographically discontinuous spread of the syndrome. People may be inadvertently transporting fungal spores from cave to cave, as fungal spores have been detected on gear exposed to affected sites.

Public outreach and scoping has been conducted through meetings, emails, letters and phone calls. Three meetings were organized in July to discuss the progression of WNS towards New Mexico with the caving community, organized caving organizations, and university scientists involved with cave and/or bat research. Over 80 people attended these meetings; notes from the meetings were then distributed through the caver and researcher networks thus reaching several hundred additional interested parties. A meeting with tribal representatives from the Four Corners area was arranged in August. Tribal members requested that a briefing paper be prepared and sent to New Mexico's 24 tribes through the All Indian Pueblo Council. This was done in late August. New Mexico's congressional delegation has also been kept informed of the interagency effort to reduce the threat of WNS in our state. Finally, the development of the New Mexico WNS Response Plan included input and cooperation from staff specialists with the National Park Service, the US Forest Service, the New Mexico Game and Fish Department and State Land Department and ten other interested agencies and organizations.

BLM's ongoing strategy to prevent or reduce the opportunity for the spread of WNS is focusing on targeted outreach efforts to discourage the public from entering caves and underground abandoned mine features on public lands and coordinating response strategies with other state and federal agencies. BLM is also increasing efforts to identify, inventory and monitor caves and abandoned mine features with important bat resources.

The U. S. Fish and Wildlife Service maintains a web site with the latest information about WNS, including a list of all cave and mine closures across the United States:  
[http://www.fws.gov/northeast/white\\_nose.html](http://www.fws.gov/northeast/white_nose.html) .

### 1.1 Purpose of and Need:

The purpose of this closure strategy is to implement a procedure and strategy to target cave and abandoned mine (hereafter referred to as “sites”) closures on public lands in New Mexico. This strategy is based on the need to reduce the opportunity for the spread of WNS and related bat mortality; and to enable BLM to better respond in a timely and effective manner to new information regarding the threat of WNS.

### 1.2 Decision to be Made:

The BLM will determine the procedures, strategies, methods and criteria for closure of sites on BLM-managed public lands.

### 1.3 Location:

The area of analysis includes all sites on public lands in New Mexico and the areas immediately surrounding their points of entry or access.

### 1.4 Conformance with Land Use Plans:

The proposed action conforms with all BLM New Mexico Resource Management Plans (RMPs), as amended. Each BLM Field Office RMP incorporates the current law, regulation and policy regarding the management of all resources on public lands.

### 1.5 Relationship to Statutes, Regulations, or Other Plans:

-The Federal Land Policy and Management Act of 1976, as amended, Public Law (P.L.) 94-579 (43 United States Code (U.S.C.) 1701 et seq.)

-The Federal Cave Resources Protection Act of 1988 (FCRPA), as amended, PL 100-691(16 U.S.C. 4301 et seq).

-BLM Manual 8380, Cave and Karst Resources Management.

-Title 43 Code of Federal Regulations (CFR), Part 37 – Cave Management.

-43 CFR § 2392.26 (all), Permits for Recreation on Public Lands.

-Visitor Services, Closure and Restriction Orders - 43 Code of Federal Regulations (CFR), Section 8364.1, as follows:

-BLM Washington Office (WO) Instruction Memorandum (IM) No. 2010-181, “White-nose Syndrome” 8/20/2010.

## **2.0 Alternatives**

### **2.1 No Action Alternative:**

Under the No Action alternative, New Mexico BLM would continue to address and manage anticipated occurrence of white-nose syndrome (WNS) in keeping with current law, regulation, and policy outlined in BLM Instruction Memorandum (IM) No. 2010-181, “White-nose

Syndrome.” This IM provides direction on how to prepare for the anticipated occurrence of white-nose syndrome (WNS) on Bureau of Land Management (BLM) administered lands nationwide. In general, the IM provides for the following containment measures:

- Coordinate and conduct outreach with appropriate internal and external stakeholders to prevent or contain the spread of WNS.
- Identify caves and abandoned mine features with important bat resources.
- Emphasize ongoing inventory efforts of Abandoned Mine Land Program Surveys.
- Adhere to BLM’s current version of containment and decontamination procedures.
- Participate in interagency groups to develop state WNS response plans that consider the Interagency National Response Plan, as appropriate.
- Recommend locations to test for the presence of WNS at a subset of the sites that have been identified as having important bat resources and support WNS research efforts where practicable and feasible within budgetary constraints.
- Consider restricting access to caves and abandoned mines on BLM-administered lands and use a targeted approach to closure that prioritizes sites with important bat resources [the purpose of this environmental assessment].

Note that the proposed action (below) would carry forward all containment and protection strategies identified in the No Action Alternative (above).

## **2.2 Proposed Action**

The proposed action is to: 1) identify sites with important bat resources for immediate closure, and 2) target and close other sites (over time) to public entry based upon the strategy and procedure identified in “Appendix A, WNS Interagency Response Plan for New Mexico.” Closure orders for sites with important bat resources would include exemptions for persons conducting search-and-rescue operations; approved WNS related monitoring, research, surveys, underground-abandoned mine surveys and closures, those authorized activities granted by the Mining Law (Per BLM IM No. 2010-181) and other approved projects that are determined beneficial to the cave resources and BLM’s management of caves. All exemptions to closure would require a permit application/proposal to be reviewed and approved by BLM’s New Mexico WNS Team on a case-by-case basis. At a minimum, under all permitted exceptions, decontamination and equipment use procedures would be stipulated and enforced (see Attachment 2, per BLM IM No. 2010-181).

To inform the public, all sites identified for closure would be: 1) signed and posted in the local Bureau of Land Management Field Office having jurisdiction over the lands to which the order applies, 2) posted at places near and/or within the area to which the closure or restriction applies, and in such manner and location as is reasonable to bring prohibitions to the attention of users. Additionally, BLM would develop a WNS web presence with information on current southwestern cave closures, links to other sites, and a section for reporting bat mortality.

Unless new information regarding the spread and transmission of WNS heightens urgency and the need for an emergency response, the duration of all closures would not exceed 24 months from the date of this decision record. The location and amount of public land identified for closure would be limited to each site and those lands immediately surrounding the point of entry.

Currently New Mexico BLM is responsible for management of 1,028 known caves on record. Of these caves 440 have been designated as “significant” in accordance with 43 CFR Part 37, which outlines the evaluation criteria for nomination. This criteria includes meeting one of 4 characteristics associated with biota, cultural, geologic/mineralogic/paleontologic or educational/scientific features.

Approximately 40 caves are currently closed or restricted to public access (permit only) either seasonally or year round. Of these closed sites, 17 have significant bat populations, as defined in Appendix A. Permits are required to visit these caves at any time and they are closed during specified periods. Additionally, nine sites that are not currently closed or restricted to the public meet the targeted closure criteria. The following sites with significant bat resources have been identified for immediate closure to public:

<b>Table 1: Caves Proposed for Immediate Closure</b>		
<b><u>Field Office</u></b>	<b><u>Bat Caves Under Current Public Closure or Access Restrictions</u></b>	<b><u>Bat Caves Currently Without Public Closure or Access Restrictions</u></b>
Roswell	Bat Hole Big-eared Corn Sinkhole Crockett's Crystal Fort Stanton Malpais Madness Martin-Antelope Gyp Cave Complex Torgac's Torgac's Annex Tres Ninos Feather	Fly Smiley Sun Spot
Carlsbad	McKittrick Sand Endless Dry Yellowjacket	Billy the Kid Rusty Hinge
Las Cruces		Lepto Splat Geronimo
Socorro		Ladrone
Rio Puerco		Pronoun Caves

Caves under seasonal closures are proposed to be closed year round by this proposed action alternative. The caves identified in this list do not represent the exhaustive list of closures. The criteria found in Appendix A would be used to identify other significant caves and other sites for closure as additional information is found.

### **2.3 Alternative Considered but Eliminated from Further Analysis**

A proposed alternative for a blanket closure of all sites was considered but eliminated from further analysis due to: 1) the lack of conclusive scientific data regarding the source of conditions under which WNS is spread<sup>1</sup>, and 2) the unrealistic challenge of closing over 1,000 caves and thousands of additional abandoned mines spread out over millions of acres of public lands in New Mexico.

### **3.0 Affected Environment**

Internal (BLM resource staff specialists) and external public scoping determined the affected resources for this analysis to include the following critical resources: 1) wildlife, 2) recreation, and 3) social and economic values.

#### **3.1 Wildlife- Bats:**

New Mexico has one of the highest diversity of bats in the United States, with 28 documented species. The variety of habitats found in the state, from low deserts to high mountains, plays a major role in New Mexico's high bat diversity, and provides a large selection of roosting opportunities for bats. Typical roosts include caves and abandoned mines, rock crevices, trees and buildings. Appropriate roosts are thought to be one of the most important limiting resources for bats, influencing social behavior, population size, and community diversity. Roosts are used for hibernating, giving birth, mating, resting (day and night), and even as migratory stopovers. Caves and abandoned mines are used by bats year round, but may be most important in the winter when hibernating bats need stable low temperatures and optimum humidity which underground roosts provide. Of the 28 bat species found in New Mexico, 16 are hibernating bats (Table 2), and all are known to use caves and abandoned mines as roost sites.

**Table 2. Bat species known or thought to hibernate in NM (USGS 2010, Findley et al. 1975).**

<b>Species Name</b>	<b>Common Name</b>
<i>Myotis auriculus</i>	Southwestern (Mexican long-eared) myotis
<i>Myotis californicus</i>	California myotis
<i>Myotis ciliolabrum</i>	Western small-footed myotis
<i>Myotis evotis</i>	Western long-eared myotis
<i>Myotis occultus</i>	Occult (Arizona) myotis
<i>Myotis thysanodes</i>	Fringed myotis
<i>Myotis velifer</i>	Cave myotis
<i>Myotis volans</i>	Long-legged myotis
<i>Myotis yumanensis</i>	Yuma myotis
<i>Parastrellus hesperus</i>	Canyon bat (Western pipistrelle)
<i>Perimyotis subflavus</i>	Tri-colored bat (Eastern pipistrelle)
<i>Eptesicus fuscus</i>	Big brown bat
<i>Antrozous pallidus</i>	Pallid bat
<i>Euderma maculatum</i>	Spotted bat
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Idionycteris phyllotis</i>	Allen's big-eared bat

<sup>1</sup> U.S. Fish and Wildlife Service "White-Nose Syndrome" webpage - <http://www.fws.gov/WhiteNoseSyndrome>



### **3.2 Recreation:**

Recreational caving on public lands is a relatively popular activity in New Mexico. Caving provides the benefits of outdoor physical exercise, discovery and exploration. In more recent times, caving has developed into a more sophisticated pastime for many as a result of the availability of modern climbing gear and protective wear. There are thousands of underground features and opportunities to explore on public lands throughout New Mexico ranging from shallow openings to extensive networks and passages. Most caving and cave exploration opportunities occur in the southeastern portion of New Mexico where there are opportunities for personal discovery, guided cave visits, and visits by permit only (site specific). There are 42 permitted caves available for recreational use with an average of 325 permits issued each year to approximately 3,200 visitors.

BLM Field Offices in New Mexico issue and administer both commercial and group-use Special Recreation Permits (SRPs) to businesses and educational institutions who provide guided cave visits and learning opportunities for students studying caves and cave related resources. Current SRPs administered by BLM include: 1) EcoServants - conducting approximately 10 commercial use trips a year for 80 people, and 2) National Outdoor Leadership School (NOLS) - conducting three visits a year for approximately 60 students for an average total of 30 days spent on BLM-managed lands.

### **3.3 Social and Economic Values:**

Whether for hobby, sport, education, or those just wanting an exciting day adventure, caving opportunities on public lands in New Mexico attracts thousands of visitors annually. These visitors hire cave guiding services and generate value added revenues resulting from expenditures on food services, lodging, automotive services and the purchase of recreation equipment. Cave related SRPs holders in New Mexico earn approximately \$65,000.00 in gross revenues annually.

## **4.0 Environmental Impacts**

### **4.1 Assumptions:**

Although there is a lack of conclusive scientific data regarding the source conditions under which WNS is spread, this analysis assumes a causal connection and risk associated with humans entering sites and bat mortality.

### **4.2 Environmental Impacts of No Action** (Existing Management Situation):

#### **4.2.1 Wildlife – Bats:**

Under the No Action alternative, human access to caves and abandoned mines used by bats would remain unchanged. Evidence collected to date in eastern states indicates that human activity in caves and mines may be assisting in the spread of WNS, even during non-hibernating seasons. Cave visitors could potentially transport the fungus (or other causative agent) on their clothing and/or equipment from affected sites into unaffected sites, putting populations of the 16 hibernating species at risk. There is also some concern that certain migratory bat populations could be at risk because they are known to share roosts with hibernating species. If WNS

maintains the mortality patterns seen in the East, bat populations could decline from 30 to 100 percent. Although decontamination requirements will be in place, there is no way to guarantee efficacy for all equipment in all circumstances, and they may not adequately address needs for technical or vertical caving gear.

#### **4.2.2 Recreation:**

Under the No Action alternative, recreational site access and related caving opportunities would remain unchanged.

#### **4.2.3 Social and Economic Values:**

Under the No Action alternative, SRP income and value added revenues resulting from cave visitation and related expenditures would remain unchanged.

### **4.3 Environmental Impacts of the Proposed Action**

#### **4.3.1 Wildlife – Bats:**

Targeted site closures of significant bat roosts would decrease human visitation, thereby decreasing the potential of inadvertent transport of the fungus (or other causative agent) on clothing and/or equipment from affected sites into unaffected sites. Although the primary method of transmission of WNS is likely bat to bat, limiting human access to significant bat roosts is considered an essential component in slowing the spread of WNS.

#### **4.3.2 Recreation:**

Sites targeted for closure may be relatively popular destinations or rarely visited sites where visitor use data is anecdotal or unavailable. Although difficult to measure, sites identified for immediate closure, and those yet to be determined, would result in a net reduction in the opportunity for recreational caving and associated benefits. For instance, based on recent visitor use data from the Carlsbad and Roswell field offices, roughly half of the permits issued for recreational use would be affected by cave closures due to white nose syndrome.

#### **4.3.3 Social and Economic Values:**

Site closures - especially the more popular cave destinations - would result in a loss of income to both cave guiding services and value added revenues resulting from visitor expenditures on food services, lodging, and the purchase of recreation equipment. NOLS has indicated that even if there were no BLM site closures, course offerings are no longer economically feasible due to current cave closures on National Park Service and US Forest Service lands.

### **4.4 Cumulative Impacts:**

Proposed site closures and future closures in combination with existing cave closures, numbering between 25 and 30 caves, would result in a cumulative reduction in recreation opportunities associated with recreational caving. Similar closures from other federal and state agencies will also increase cumulative effects to recreation.

## **5.0 Consultation and Coordination**

An interagency task force was created in order to develop a response to WNS. This task force is made up of federal and state organizations who meet regularly to develop the response plan and coordinate on implementation. The cooperators in this task force discussed the proposed action identified in this EA and agreed on the objectives and procedures. The task force members include:

### **Cooperators:**

BLM  
US Forest Service  
National Park Services  
New Mexico Department of Game and Fish

### **Interested Party**

Bureau of Indian Affairs  
US Fish and Wildlife Service  
New Mexico Abandoned Mine Lands Bureau  
New Mexico State Land Office  
National Speleological Society  
Southwest Region of the NSS  
New Mexico Bat Working Group

## **References:**

### **List of Preparers:**

Rob Jagers – Outdoor Recreation Planner, BLM New Mexico State Office  
James Goodbar – Senior Cave/Karst Specialist, BLM Washington Office  
Marikay Ramsey – State Threatened and Endangered Species Program Lead, BLM New Mexico State Office  
Mike Bilbo – Cave/Karst Resources Specialist, BLM Roswell Field Office  
Megan Stouffer – State Planning and Environmental Coordinator, BLM New Mexico State Office

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(Preparer)

Date

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(NEPA Reviewer)

Date

**APPENDIX A**  
**WNS Interagency Response Plan for NM**  
**(NM and AZ for USFS-R3)**

**Defining a Significant Bat Roost for Southwestern bat species found in NM and AZ**

Standard Criterion: A hibernaculum, maternity roost, bachelor roost, day roost, or fall swarming (mating) roost that is used by obligatory cave or mine dwelling species, or species that use multiple roost types including caves and mines.

Rationale: These types of bat roosts are thought to be critical to the survival of bat populations (Altenbach and Pierson 1995). Only cave and mine roosts are included because the fungus (*Geomyces destructans*) associated with WNS thrives in the darkness, low temperatures, and high humidity characteristic of many caves and mines, and has been a consistent pathogen among affected bats and sites (USGS 2010).

Qualifying Species: Twenty bat species in NM and AZ primarily use caves and mines as roosting habitat, or use multiple roost types including caves and mines (Table 1). Three additional species (*Euderma maculatum*, *Parastrellus hesperus* and *Lasionycteris noctivagans*) have been found roosting in caves, but too infrequently to be considered cave and mine dwellers.

Table 1 –NM and AZ bat species that are known to use caves and mines as roosts.

Scientific name	Common name
* <i>Mormoops megalophylla</i>	Ghost-faced bat
* <i>Leptonycteris yerbabuenae</i>	Lesser long-nosed bat
* <i>Leptonycteris nivalis</i>	Greater long-nosed bat
* <i>Choeronycteris mexicana</i>	Mexican long-tongued bat
* <i>Macrotus californicus</i>	California leaf-nosed bat
<i>Myotis californicus</i>	California myotis
<i>Myotis ciliolabrum</i>	Western small-footed myotis
* <i>Myotis velifer</i>	Cave myotis
<i>Myotis evotis</i>	Long-eared myotis
<i>Myotis volans</i>	Long-legged myotis
<i>Myotis auriculus</i>	Southwestern myotis
<i>Myotis occultus</i>	Occult (Arizona) myotis
<i>Myotis thysanodes</i>	Fringed myotis
<i>Myotis yumanensis</i>	Yuma myotis
<i>Perimyotis subflavus</i>	Tri-colored bat
<i>Eptesicus fuscus</i>	Big brown bat
* <i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Idionycteris phyllotis</i>	Allen's big-eared bat
<i>Antrozous pallidus</i>	Pallid bat
<i>Tadarida brasiliensis</i>	Mexican free-tailed bat

\* = primarily roosts in caves and mines. Others roost in multiple roost types including caves and mines.

Additional Criterion A: Roosts that are used by colonial (at some point in their life history) bat species that hibernate during the winter.

**Rationale:** Since the first confirmation of WNS in early 2007, it has been an emerging disease of colonial, hibernating bat species. As of May 2010, most species of hibernating bats in the eastern United States have been affected (USGS 2010).

**Qualifying Species:** There are 14 bat species in NM and AZ that are known to roost colonially and hibernate over winter (Table 2).

Table 2. NM and AZ bat species that roost colonially and hibernate.

Scientific name	Colonial Roosting?	Hibernate?
<i>Myotis californicus</i>	Yes – maternity & hibernacula	Yes
<i>Myotis ciliolabrum</i>	Yes – small clusters for maternity & hibernacula	Yes
<i>Myotis velifer</i>	Yes	Yes
<i>Myotis evotis</i>	Yes – maternity	Little data available; suspected to hibernate in NM (Geluso 2007)
<i>Myotis volans</i>	Yes	Yes
<i>Myotis auriculus</i>	Yes	Yes
<i>Myotis occultus</i>	Yes – maternity	Little data available; suspected to hibernate in NM (Geluso 2007)
<i>Myotis thysanodes</i>	Yes – maternity	Little data available; suspected to hibernate in NM (Geluso 2007)
<i>Myotis yumanensis</i>	Yes – maternity	Little data available; suspected to hibernate in NM (Geluso 2007)
<i>Perimyotis subflavus</i>	Some small maternity colonies	Little data available; single documentation of hibernation in NM (Valdez et al. 2009)
<i>Eptesicus fuscus</i>	Yes	Yes
<i>Corynorhinus townsendii</i>	Yes	Yes
<i>Idionycteris phyllotis</i>	Yes – maternity	Little data available; suspected to hibernate in NM (Geluso 2007)
<i>Antrozous pallidus</i>	Yes – small colonies	Yes

**Additional Criterion B:** Species Status – NM and AZ cave and mine roosting bat species that are ESA-listed, federal agency-sensitive or species of concern, state-listed, or ranked High, on Western Bat Working Group’s (WBWG) Regional Bat Species Priority Matrix.

**Rationale:** Listed species and “species of concern” are included because these bat species are perceived as vulnerable or threatened, or are in need of specific conservation actions separate from the threat of WNS. If WNS continues its westward spread, these species may be at additional risk from the disease.

**Qualifying Species:** Seventeen of the 20 cave and mine roosting bat species are ESA listed (2), federal agency sensitive or species of concern (15), state-listed (2), or ranked ‘High’ on WBWG’s matrix (6) {Table 3}. Thirteen of the species that met Criterion A also meet Criterion B, and four additional species meet Criterion B.

These four species roost colonially but migrate rather than hibernate. They were included because they are known to share roosts with hibernating bat species, and therefore may be at risk, or may help spread the fungus across their migratory routes.

*L. yerbabuenae* – Known to share roosts with *A. pallidus* (Fleming 1991).

*L. nivalis* - Known to share roosts with *C. townsendii*, and may use the same roost as *M. thysanodes* and *M. volans*, but at different times (WBWG 2005).

*C. mexicana* – Known to share roosts with *C. townsendii* (California DGF 2000). *Macrotus californicus* – Known to share roosts with *C. townsendii* (Pierson, et al 1999) and *Myotis californicus* (King, et al. 2003).

Table 3 – NM and AZ “special status” bat species that roost in caves and/or mines.

Scientific name	ESA	USFS	BLM	NPS	State	WBWG
<i>Leptonycteris yerbabuenae</i>	E				T (NM) E (AZ)	H
<i>Leptonycteris nivalis</i>	E				E (NM)	H
<i>Choeronycteris mexicana</i>		X	X			H
<i>Macrotus californicus</i>		X				H
<i>Myotis californicus</i>				X		L
<i>Myotis ciliolabrum</i>				X		M
<i>Myotis evotis</i>				X		M
<i>Myotis volans</i>				X		M
<i>Myotis auriculus</i>				X		M
<i>Myotis occultus</i>				X		M
<i>Myotis thysanodes</i>				X		M
<i>Myotis yumanensis</i>				X		L
<i>Perimyotis subflavus</i>						NA
<i>Eptesicus fuscus</i>				X		L
<i>Corynorhinus townsendii</i>		X	X	X		H
<i>Idionycteris phyllotis</i>		X	X			H
<i>Antrozous pallidus</i>				X		L

**ESA** – any species listed as Endangered (E), Threatened (T), Candidate (C) or Proposed (P) under the Endangered Species Act.

**USFS Sensitive Species** - Species identified by the Regional Forester for which population viability is a concern as evidenced by: a) current or predicted downward trend in population or density; b) current or predicted downward trend in habitat capability that would reduce an existing distribution.

**BLM Sensitive Species** – a native species found on BLM-administered lands for which the BLM has the capability to significantly affect the conservation status through management, and either: 1) predicted or current downward trend, or 2) depends on ecological refugia or specialized habitats that are threatened.

**NPS** – National Park Service species of concern, El Malpais National Monument.

**State** – NM Endangered – a species in jeopardy of extinction or extirpation from NM; NM Threatened – a species likely to become endangered within the foreseeable future throughout all or most of its range in NM. AZ Endangered - a species in jeopardy of extinction or extirpation from AZ.

**WBWG:**

- High (H) - Species that are imperiled or are at high risk of imperilment.
- Medium (M) – Species that warrant closer evaluation, more research, and conservation actions.
- Low (L) – The overall status of the species is believed to be secure.

Additional Criterion C: NM and AZ cave and mine roosting bat species that form roosts of 30 individuals or more, or form large roosts with other bat species.

Rationale: Large roosts are important because they are more vulnerable to human disturbance and persecution. Many caves that were once known to house large concentrations of bats, even millions, no longer are used by bats due to disturbance (Tuttle and Moreno 2005). Bats are especially vulnerable to decline because they have a low potential for population growth, generally giving birth to only one offspring per year.

Qualifying Species: Twelve of the 20 cave and mine roosting bat species are known to form large (>30 individuals) roosts, or form large congregations with other bat species (Table 4). Ten of these species also met Criterion A or B or both, with two additional species meeting Criterion C.

Table 4 –NM and AZ cave and mine bat species that form large (>30 individuals) bat roosts.

Scientific name	Large Colonies?
<i>Mormoops megalophylla</i>	Yes
<i>Leptonycteris yerbabuenae</i>	Yes
<i>Leptonycteris nivalis</i>	Yes
<i>Choeronycteris mexicana</i>	Yes
<i>Macrotus californicus</i>	Yes
<i>Myotis velifer</i>	Yes
<i>Myotis occultus</i>	Yes
<i>Myotis thysanodes</i>	Yes
<i>Myotis yumanensis</i>	Yes
<i>Eptesicus fuscus</i>	Yes
<i>Corynorhinus townsendii</i>	Yes
<i>Tadarida brasiliensis</i>	Yes

**Attachment 1**  
**BLM Instruction Memorandum No. 2010-181**  
**Bureau of Land Management**  
**White-nose Syndrome Interim Response Strategy**  
**August 2010**

**1. Stakeholder Coordination:** Effective disease management requires a coordinated and consistent approach to the extent feasible. The Bureau of Land Management (BLM) will coordinate with appropriate internal and external stakeholders to prevent and contain the spread of white-nose syndrome (WNS). Stakeholders may include BLM program coordinators, state and other Federal agency partners, tribes, and concerned members of the public. The BLM values partners and relies on them for most of the “on-the-ground” cave management activities that occur on BLM-administered lands. The BLM will consider this valuable coordination in developing policies and actions.

**2. Identify Sites with Important Bat Resources:** BLM offices will utilize the best available scientific information to assess and identify sites on BLM-administered lands that have important bat resources. The purpose of this assessment is to identify sites as potential disease surveillance locations and to assess sites for closure to public entry. Best available scientific information may include, but is not limited to state/district/field office files, Federal agencies, State wildlife agencies, State abandoned mine programs, bat researchers, speleological societies and other recreational caving groups, published accounts, and local experts. Assessment of the importance of bat use at a particular site is locally subjective and should be coordinated with state fish and wildlife agencies and other stakeholders, and assessment should consider local ecological factors. Examples of factors to consider when identifying sites that have important bat resources include the potential for the species to be affected (based on what is known at the time of assessment), status of the species present, number of individuals, proximity to human populations, frequency of human entry, and timing and duration of bat use. The BLM offices will coordinate with state fish and wildlife agencies as described in 43 Code of Federal Regulations, Part 24.4 in the assessment of importance of bat resources. For sites with no previous bat inventories, the BLM offices should evaluate their potential value as bat habitat using existing information and best professional judgment.

Bureau policy generally limits the duration of temporary closure or restriction orders to 24 months or less. The BLM must also generally comply with the National Environmental Policy Act prior to closing public lands to certain uses or restricting specific uses of the public lands. For additional information, Refer to IM 2010-28, Requirements for Processing and Approving Temporary Public Land Closure and Restriction Orders.

The BLM state offices will identify a state WNS point-of-contact within 30 days of the issuance of this Instruction Memorandum (IM). The identified contact will work with the BLM Washington and state offices in the coordination of the BLM’s response to WNS including the collation and transfer of data, as appropriate. For outreach and communication purposes, states will coordinate with the Washington Office regarding which sites, if any, are proposed for closure. To assist the Washington Office in facilitating the BLM response to Attachment 1-2 WNS, existing site data as described in Attachment 3, Site Feature Bat Inventory Spreadsheet,



will be submitted to Jessica Rubado, Division of Fish, Wildlife and Plant Conservation, with copies to Erinn Shirley, Division of Environmental Quality and Protection, Abandoned Mine Lands Program, and James Goodbar, Division of Recreation and Visitor Services within 90 days of the issuance of this IM.

**3. Emphasize Ongoing Inventory Efforts:** The BLM conducts inventory of Abandoned Mine Lands that collect bat presence information; states will continue these ongoing efforts.

**4. Site Administrative and Physical Closure:** The BLM State Director will assess which, if any, sites at risk for spread of WNS will be administratively or physically closed. It is suggested that BLM State Directors utilize a targeted approach to closure that prioritizes sites with important bat resources. The BLM offices will carefully evaluate whether restricting access to caves and abandoned mines on BLM administered lands is appropriate to minimize the spread of WNS. Before recommending closure orders, managers will coordinate with land managers at other agencies and consider the effectiveness and level of public support relative to using voluntary restrictions and applying decontamination procedures.

Closure orders for sites with important bat resources will include exemptions for persons conducting search-and-rescue operations, approved WNS related monitoring, research, surveys, underground abandoned mine surveys and closures, and those authorized for activities granted by the Mining Law. The BLM offices will require decontamination procedures to be followed by all exempted parties.

**5. Identification of Potential WNS Surveillance Locations:** The BLM state offices will recommend locations to test for the presence of WNS at a subset of the sites that have been identified as having important bat resources. To facilitate the coordination of the ongoing national interagency response effort for WNS, the BLM states are directed to identify and submit to Jessica Rubado, Division of Fish, Wildlife and Plan Conservation, the locations, if any, they recommend for testing on BLM administered land within 90 days of the effective date of this IM.

The BLM will utilize its external partners in assisting with reporting the presence of the fungus and suspected WNS afflicted bats. Examples of groups assisting with reporting information include Federal and state agencies, recreational cavers, mining claimants, field personnel, and contractors.

A number of different documents outlining protocols for surveillance and monitoring are being developed by various Federal and state groups. In addition, the surveillance working group associated with the WNS national response planning process is preparing recommendations on how to conduct these activities.

**6. Containment and Decontamination:** The BLM offices will implement the attached BLM-WNS containment and decontamination procedures (Attachment 2) immediately for all site entries. The BLM states and district offices will collaborate with stakeholders as appropriate, Attachment 1-3 including caving organizations, concessionaires, abandoned mine contractors, state agencies, and other parties to apply containment and decontamination procedures for all caves and abandoned mine feature entries. Also refer to the USFWS White-Nose Syndrome Decontamination Protocols for Researchers located at:

[http://www.fws.gov/WhiteNoseSyndrome/ppt/NPS\\_Decontamination\\_Protocols\\_Webinar\\_June\\_9\\_2010.ppt](http://www.fws.gov/WhiteNoseSyndrome/ppt/NPS_Decontamination_Protocols_Webinar_June_9_2010.ppt).

**7. Research:** Where practicable and feasible within budgetary constraints, the BLM will participate in and support WNS research efforts.

**8. Outreach:** The BLM will educate its internal and external stakeholders through various forms of media and also participate in the educational efforts of other governmental and non-governmental organizations. The BLM Washington Office will create an external WNS web page to inform the interested publics of our efforts concerning WNS. An internal WNS web page will be created to share information amongst the state and district offices. The BLM will participate, where appropriate, in interagency media activities in cooperation with other organizations to heighten public awareness of WNS. A BLM WNS Communication Plan is under development.

**Attachment 2**  
**BLM Instruction Memorandum No. 2010-181**  
**Containment and Decontamination Procedures for Bureau of Land Management**  
**Administered Lands to Minimize the Spread of White-Nose Syndrome in Caves and**  
**Abandoned Mines August 5, 2010**

Since the first observation in New York State in early 2006, White-nose Syndrome (WNS) in bats has been documented across the eastern United States (U.S.) and Canada, and most recently in Missouri and Oklahoma. The *Geomyces destructans* fungus is considered to be the primary causal agent of the mass mortality of these bats. Mortality rates at affected sites are high, typically 80 to 100 percent.

In addition to the presence of the fungus, fat reserves of bats afflicted with WNS are prematurely depleted by mid-winter, as opposed to persisting until spring. This depletion of fat reserves results in starvation, and typically subsequent death. Although bat-to-bat transmission has been the focus of transmission studies and has been found to be a significant vector for the spread of WNS, long distance jumps of WNS from New England to West Virginia could have been a result of human transmission between sites. Recent unpublished studies have shown persistence of *G. destructans* spores on field equipment exposed to contaminated caves. Other research has shown that spores may become adhered to cave clothing, boots, gear, etc., indicating that *G. destructans* could be transported between sites. In light of this information, it is imperative that individuals who must enter caves or abandoned mines follow the containment and decontamination procedures described in Sections 3 and 5 to prevent further spread of WNS.

Note: The recommended decontamination products listed in Section 5 have been found to be effective at killing the fungus in a laboratory setting; However, research is still needed to test the effectiveness of these products in the field. We are aware that implementing these procedures requires a significant change to the historical ways surveys or other visitations have been conducted underground. However, it is our responsibility to use reasonable procedures in accordance with agency resources and other priorities to avoid being vectors of WNS.

**SECTION 1: Characteristic Signs of WNS**

During summer months, bats are normally active near dusk and dawn. During the winter months, bats may be active during the day when temperatures are warm and tolerable. Different bat species naturally go into varying degrees of torpor during hibernation, and if the environmental conditions are right they can arouse and exit hibernacula. Bats **may** be considered WNS-affected when:

They are observed flying on the landscape during very cold temperatures.

They are observed clinging to surfaces outdoors in winter.

A white fungus is visible on their bodies, particularly on the nose and forearms.

They have a dehydrated appearance.

They are alive, but found on the ground and appear unresponsive.

Numerous bats have been found sick or dead at a location where a large population exists.

**You should not handle bats** unless specifically authorized to do so. If you should observe live or dead bats that are exhibiting characteristic signs of WNS, report this immediately to the appropriate BLM office, state wildlife agency, or U.S. Fish and Wildlife Service Ecological Services Field Office (<http://www.fws.gov/offices>).

For WNS, bat and cave research decontamination procedures, refer to protocols given by the FWS at: USFWS White-Nose Syndrome Decontamination Protocols for Researchers.

## **SECTION 2: General Guidelines to Prevent the Spread of WNS**

Avoid entry into all caves and abandoned mines, and observe closures and advisories.

**Never use gear that was used in a WNS-affected state outside of that state.**

**Decontaminate used gear** immediately, store gear away, and thoroughly wash and decontaminate any surfaces with which these items may have come into contact (e.g., car trunk, duffle bag, etc.).

## **SECTION 3: Containment and Decontamination Procedures**

### **3.1 Caves:**

The term —cave|| as defined in the Federal Cave Resources Protection Act includes all features whether they are known to be used by bats or not. A cave is defined under the Federal Cave Resource Protection Act as —any naturally occurring void, cavity, recess, or system interconnected passages beneath the surface of the earth or within a cliff or ledge that is large enough for a person to enter, whether the entrance is excavated or naturally formed||.

**Cave Entry:** If possible, avoid cave entry. All clothing, footwear, safety and work equipment, and other required implements should not be used in multiple entries on the same day unless the cleaning and decontamination procedures can be performed between each entry. In situations where caves are known to be interconnected and have multiple entrances, decontamination is not required between entry at the various entrances, within the same day. Keep the number of items intended to be brought into a cave to a minimum. Prepare for cave exit by placing a plastic container near the entrance of the cave. The plastic container should contain necessary equipment for on-site decontamination. On-site decontamination equipment includes such items as plastic bags, small broom, extra clothing, footwear, and equipment. In some situations where caves are concentrated in a small area, states may identify logical decontamination areas that allow decontamination between cave clusters that are likely to be used by the same group of bats. Enter each cave with clean clothing, footwear, and equipment. Tyvek® or other disposable outerwear, rubber boot covers, and latex rubber gloves be used for each site entry in lieu of decontamination procedures for clothing. Upon exit, place items in sealable containers, to be appropriately decontaminated or disposed of off-site. Companion animals should be kept out of caves.

**Cave Exit:** At or near the exit of the cave, brush dirt and mud from all clothing, equipment, ropes, and any other items carried into the cave. Brushing dirt and mud off of clothing is especially important as organic material (i.e., clay soils) can prevent the chemical products from penetrating equipment, clothing, and boots, etc.

Exposed portions of the skin (e.g., face, neck, hands, arms) should be wiped down with disinfectant wipes. Place used wipes in a sealable plastic bag.  
Place all contaminated equipment and clothing which are to be decontaminated off-site in a sealable plastic bag and/or plastic container.

Change into clean clothing and footwear. Place contaminated clothing and footwear into a sealable plastic bag and/or container. A clean change of clothing is required after a cave visit.

Do not enter vehicles with contaminated clothing or equipment.

Showering or bathing is required after cave visits, including when conducting multiple-day excursions to multiple sites.

**3.2 Show Caves:** Work with contractors, special use permittees, concessionaires, and resource professionals to develop a site specific decontamination process for all individuals entering show caves. Some suggested actions, restrictions, or activities are:

Educate visitors about the WNS situation. Examples of WNS educational efforts in place are available at the National Park Service's Mammoth Cave website (<http://www.nps.gov/macawhitenose.htm>).

Close the cave to public entry during hibernation season (roughly from October 1 – May 1).  
Restrict human entry from portions of caves used by bats any time of year.

Control visitor traffic to well-defined, physically contained pathways.

Do not allow visitors to enter the cave with footwear, clothing, and other accoutrements that have been worn or carried into another cave or underground resource, or allow the visitor to sanitize their items prior to entry.

Provide disposable rubber booties, overshoes, and/or Tyvek suits for visitors.

Provide a supervised decontamination station for visitors to utilize.

### **3.3 Decontamination of Clothing and Equipment:**

All clothing and gear used for underground site entry must be clean or be decontaminated prior to entry.

**3.3.1 Submersible Gear** (i.e., clothing and equipment that can be submerged without damage):  
General guidance: Check the manufacturer's information on all of your clothing, equipment, and other items requiring decontamination to ensure that these items can withstand the application of the recommended decontamination products. If the effects of the decontamination procedures and products to your clothing, equipment, and other items are unknown, it is advised that these items be used only where decontamination procedures are not in effect or dedicate these items to

one cave, or do not use them at all. In lieu of chemical treatment, the contaminated items can be boiled in water for at least 15 minutes.

Decontamination products are listed in Section 5.

**Clothing and equipment suitable for immersion:** Wash all clothing and all suitable equipment in a washing machine or by hand at any water temperature using conventional detergents. Rinse items thoroughly and then soak items for a minimum of 10 minutes in one of the recommended decontamination products. After soaking, rinse item again and hang to dry.

Laboratory testing has found Woolite® fabric detergent to be the most effective surfactant for this procedure.

**Footwear:** Rubber caving boots (Wellington-type) are recommended for cave entry. Boots need to be completely scrubbed free of all visible soil and organic material and rinsed at the cave entrance. Rubber and leather boots, including soles and leather uppers, can then be decontaminated with an appropriate decontamination product for a minimum of 10 minutes, rinsed, and air dried.

**Ropes, Webbing, and Harnesses:** To date, only *Sterling rope and webbing* have been shown not to be damaged by this decontamination procedure: Wash rope/webbing in a front loading washing machine on the gentle cycle using Woolite Extra Delicates detergent. After the cycle is complete, immerse the rope/webbing in a 1:128 dilution of Lysol® IC Quaternary Disinfectant Cleaner for 15 minutes. Rinse rope/webbing at least two times in clean water and allow to air dry.

If you are using other brands of rope and webbing not mentioned above, these products have yet to be tested for integrity after decontamination. In cases where safety following decontamination has not yet been evaluated, then ropes and webbing should be dedicated to one cave or not used at all to prevent the spread of WNS.

### **3.3.2 Non-submersible Gear:** (i.e., equipment that will be damaged by submersion):

**General guidance:** Check the manufacturer's information on all of your clothing, equipment, and other items requiring decontamination to ensure that these items can withstand the application of the recommended decontamination products.

If the effects of the decontamination procedures and products to your clothing, equipment, and other items are unknown, it is advised that these items be used only where decontamination procedures are not in effect or dedicate these items to one cave, or do not use them at all.

In lieu of chemical treatment, the contaminated items can be boiled in water for at least 15 minutes.

Recommended decontamination products are listed in Section 5.

**Cameras and Electronic Equipment:** Cameras and other similar equipment that must be carried into a cave may be placed in plastic casing (i.e., underwater camera housing) or wrapped in plastic wrap where only the lens is left unwrapped to allow for proper camera function. Lysol disinfecting wipes can be used to decontaminate the plastic casing or plastic wrap.

If no protective cover is used, electronic equipment can be decontaminated using the Lysol disinfecting wipes. Refer to the equipment manufacturer's instructions before applying any of the decontamination products.

**Vehicles:** Always remove and contain clothing and gear away from your vehicle in sealed plastic bags and storage containers with lids and wipe them with wipes prior to placing them in your vehicle. Properly dispose of, or decontaminate, bags and storage containers used to hold contaminated clothing and gear using the decontamination products listed in Section 5.

#### **SECTION 4: Special Guidance for Abandoned Mines**

Only those individuals who are sanctioned to conduct activities in abandoned mines may enter. Sanctioned activities authorized by the 1872 Mining Law and the BLM's regulations at 43 CFR Subpart 3809 and other BLM-authorized activities such as bat surveys and studies. An abandoned mine is defined as a hardrock mine on or affecting public lands administered by the BLM, at which exploration, development, mining, reclamation, maintenance, inspection of facilities and equipment, and other operations ceased as of January 1, 1981 (the effective date of the BLM's Surface Management regulations codified at 43 CFR Subpart 3809), with no evidence demonstrating that the miner intends to resume mining. Abandoned mines generally include a range of mining impacts, or features that may pose a threat to water quality, public safety, and/or the environment. Adits, shafts, and tunnels are abandoned mine features.

In situations where surveys are being conducted for abandoned mine feature closures for human safety, or multiple sites are being visited in a single day, we recommend the following:

Avoid entry if possible.

Limit entry to that necessary to safely perform required work. For construction this is typically less than 50 feet inside the adit or shaft.

Follow the decontamination and containment procedures outlined below between sites if feasible. If not, at a minimum follow the containment procedures and identify opportunities for decontamination at the smallest possible geographic unit to minimize risk of contamination between locations, as appropriate. These geographic units will not exceed hydrologic unit code level 5 boundaries (HUC).

Decontamination must occur no less frequently than at the end of each day.

Air monitors are required safety equipment for underground abandoned mine entry. Consult with the manufacturer of your air monitor prior to applying any decontaminant chemicals, to ensure that the sensors and electronic components are not compromised in any way. Follow the manufacturer's recommended procedures.

#### **SECTION 5: Recommended Decontamination Products**

The following chemical products were tested in a laboratory setting and were found to be particularly effective against killing the more resistant, spore-form of *Geomyces destructans*, as well as the hyphae: Lysol IC Quaternary Disinfectant Cleaner (with a minimum of 0.3%

quaternary ammonium compound) or chemical equivalent—this is a concentrate which requires a 1:128 dilution (1 part concentrate to 128 parts water or 1 ounce of concentrate per gallon of water). Lysol All-purpose Professional Cleaner, or chemical equivalent. Formula 409® Antibacterial All-Purpose Cleaner (with a minimum of 0.3% quaternary ammonium compound), or chemical equivalent. A 10% solution of household bleach—this must be made by measuring 1 part bleach to 9 parts water (an estimate of 1:9 is insufficient). Lysol Disinfecting Wipes, or chemical equivalent. Boiling water.

**Detergents and quaternary ammonium compounds (e.g., Lysol IC Quaternary Disinfectant Cleaner) should not be mixed with bleach as this will inactivate the bleach, and in some cases produce a toxic chlorine gas. Quaternary ammonium products such as 409 and Lysol cleaner must be properly disposed of in accordance with instructions contained in the Material Safety Data Sheet for those products. If using bleach solution, do not store dilution for more than 24 hours** as the bleach will begin to break down once it is diluted. Store in opaque bottles as bleach also breaks down when exposed to sunlight. Product guidelines should be consulted for compatibility before using any decontamination product listed under Section 3 on specific equipment.



### **Attachment 3**

#### **Memorandum**

**From:** BLM NM State Director

**To:** All New Mexico Field Offices

**Subject:** BLM New Mexico State Policy for Review of Public Proposals for Cave and Karst Projects

The New Mexico Bureau of Land Management is developing a process to administer public proposals for cave use other than for the normal issuance of recreational cave permits and standard Special Recreation Permits for caves. These changes are needed to address increasingly complex and controversial cave use proposals, to take advantage of newly available cave science and management expertise, and review health, safety, and liability issues. When complicated or consumptive proposals are being evaluated the process may provide additional public participation to advise on projects and to develop the best science and information available to make decisions.

Effective immediately, each BLM office managing caves will accept public proposals for cave use within their jurisdiction. This would include, but is not limited to, proposals for research, exploration (including digs), surveys, inventories, restoration projects, special filming and photography projects, and other commercial or consumptive uses (such as collecting) that have the potential to unduly effect cave and karst resources.

Any competent researcher with a proposed project that is consistent with BLM policies and likely to contribute to the management and understanding of BLM cave and karst resources is encouraged to work on BLM lands. Project proposals must be submitted to the managing field office for review by a proposal review team assembled by the BLM. The proposal will be approved or disapproved by the Field Office Manager. A Research Permit and Collecting Permit (if applicable) will be issued to an approved Project Leader. Researchers and project leaders will provide the BLM with all appropriate data from their studies or projects in an appropriate format, such as field notes, inventory notes, survey notes, photographs, special reports, scientific articles and reprints, and /or other materials.

Proposals should include at a minimum:

1. Who (what group, institute, or organization) will be conducting the activity
2. A detailed description of the activity proposed
3. Why it is needed
4. Duration of the project
5. If any collecting will be necessary; what is proposed to be collected, need for collection, where collections will take place, what research will be done on the collected material, disposition or storage location of the collected materials.
6. What benefit will their project be to the public or to cave/karst resources on BLM lands
7. What the BLM will receive in the form of reports etc.
8. What time frame will these receivables be given to the BLM

Once a proposal is received by the administering BLM office the following process will be followed:

- Upon receipt by the local Field Office, a proposal will be forwarded to the State Cave/Karst Mgmt Team Lead.
- Project will be reviewed by Field Office and team lead to determine need and magnitude of further review.
- Project may need no further analysis or may need further review by review team and/or outside subject matter experts.
- If further review is needed the State Cave/Karst Management Team will determine the best list of reviewers not to exceed three persons.
- Prospective reviewers will be contacted.
- Proposal(s) will be sent to reviewers for a 3 week review/comment period.
- Upon return to State Cave/Karst Management Team the reviewers comments will be evaluated and incorporated as needed.
- Additional public review may be needed
- Proponent will be contacted with proposed modification if necessary.

If accepted or negotiated the project will be recommended for approval to the respective Field Manager. If a proposal is rejected it will be returned to the proponent with a rationale.

If you have any question concerning this new policy please Jim Goodbar (505) 234-5929 of my staff.

Linda Rundell, State Director  
New Mexico Bureau of Land Management